

**Before the
Federal Communications Commission
Washington, D.C. 20554**

In the Matter of)	
)	
EchoStar Satellite Corporation)	
Application for Authority to Make Minor)	File Nos. SAT-MOD-19971230-00231;
Modifications to Direct Broadcast Satellite)	SAT-MOD-19971230-00235; DBS-88-01
Authorizations, Launch and Operation Authority)	
)	
Request for Waiver of Section 100.21 of the)	DBS-88-01
Commission's Rules)	

MEMORANDUM OPINION AND ORDER

Adopted: November 24, 2000

Released: November 27, 2000

Before the Chief, Satellite and Radiocommunication Division:

1. By this order we grant EchoStar Satellite Corporation ("ESC") authority to make minor modifications to its Direct Broadcast Service ("DBS") satellite constellation. We find that these modifications to ESC's satellite configuration will allow ESC to provide improved service to its customers. We also grant ESC's request for a waiver of Section 100.21 of our rules with respect to power limits. Finally, we deny the petition for conditions filed by the State of Hawaii.

I. BACKGROUND

2. ESC provides DBS services to customers throughout the United States from various orbit locations including 119° W.L. At this orbit location, ESC operates three satellites: EchoStar 1 at 119.2° W.L.; EchoStar 2 at 119.05°; and EchoStar 4 at 119.35°. In addition, ESC is authorized to operate its satellite EchoStar 6 at the 110° W.L. orbital location.¹ However, in its application, ESC seeks authority to operate the recently launched EchoStar 6 satellite at 119.05° W.L. ESC also seeks authority to relocate EchoStar 4 to 118.9° W.L and EchoStar 2 to 119.35° W.L.² Further, in this application, ESC notifies the Commission of its intent to move EchoStar 1 from 119° W.L. to 148° W.L., as previously authorized.³ On

¹ Application of MCI Telecommunications Corp. and EchoStar 110 Corporation, Assignee, *Order and Authorization*, FCC 99-109 (rel. May 19, 1999). ESC also operates EchoStar 3 from the 61.5° W.L. orbit location and EchoStar 5 at the 110° W.L. orbit location.

² On July 14, 2000, EchoStar 6 was launched and ESC was granted special temporary authority to test all 32 transponders on EchoStar 6 at the 148° W.L. orbit location. Upon the completion of testing, the Commission granted ESC special temporary authority to operate EchoStar 6 at 119.05° W.L. to begin providing immediate DBS service to consumers. It was also granted temporary authority to move EchoStar 2 and EchoStar 4 to different locations within the 119° W.L. cluster. See Letter to David K. Moskowitz, Senior Vice President and General Counsel of EchoStar Satellite Corporation from Chief, FCC Satellite and Radiocommunication Division, dated August 10, 2000.

August 10, 2000, the Commission granted ESC special temporary authority (“STA”) to operate EchoStar 6 at 119.05° W.L. and relocate EchoStar 2 and 4, subject to conditions.⁴

3. In support of its application, ESC asserts that operating the new, higher capacity EchoStar 6 at 119° W.L. will allow ESC to relocate EchoStar 1 from 119° W.L. to 148° W.L. This move, ESC states, will allow it to commence service at 148° W.L. in advance of its milestone deadlines.⁵ In addition, the operation of EchoStar 6 at 119° W.L. in conjunction with EchoStar 2 and EchoStar 4 will expand the total number of channels available to serve Alaska and Hawaii. Further, EchoStar 6 will be capable of serving Alaska and Hawaii with “relatively small” earth station receive antennas.⁶ It will also provide backup capacity to compensate for EchoStar 4, which has experienced technical anomalies and is expected to have a limited life. ESC claims that grant of this modification request will increase the amount of in-orbit spare capacity for its satellite constellation. According to ESC, because its satellites are dispersed over various locations in the geostationary satellite orbital arc, the availability of centrally located in-orbit spare capacity is important to system reliability.⁷ Finally, ESC states that its proposed modifications are minor and will not increase the potential for interference or change proposed frequencies or orbital locations to be used.⁸ ESC notes that DIRECTV, the only other licensee at 119° W.L., has consented to the proposed modifications, and that no other administrations are affected by the proposed modifications.⁹

4. The State of Hawaii filed comments stating that it does not oppose the application, but requests that the authorization be subject to four specific conditions to improve ESC’s service to Hawaii.¹⁰ First, Hawaii requests assurances that EchoStar 6 will be technically capable of serving customers in

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³ EchoStar Satellite Corporation, Directsat Corporation, EchoStar DBS Corporation, Application for Authority to Make Minor Modifications to Direct Broadcast Satellite Authorizations, Launch and Operational Authority, *Memorandum Opinion and Order*, 13 FCC Rcd 8595 (1998).

⁴ Letter to David K. Moskowitz, Senior Vice President and General Counsel of EchoStar Satellite Corporation from Chief, FCC Satellite and Radiocommunication Division, dated August 10, 2000.

⁵ EchoStar Satellite Corporation, Application for Minor Modification of DBS Authorizations, Launch and Operation Authority (“*EchoStar Application*”), filed June 7, 2000, at 6. The operation milestone for EchoStar to commence operations at 148° W.L. is December 2002. EchoStar DBS Corporation, *Order*, 11 FCC Rcd 16291, 16295 (1996).

⁶ *EchoStar Application*, at 7.

⁷ *Id.* at 8.

⁸ *Id.* at 9.

⁹ *Id.* at 9.

¹⁰ *Hawaii Petition to Deny*, at 3. See also Ex parte Letter filed November 9, 2000, where Hawaii urges the Commission to mandate “full” DBS service of comparable or equal value to that provided in the rest of the United States; Ex parte letter filed November 21, 2000, asserting that sales of EchoStar service in Hawaii are poor because the programming package offered is not competitive with that offered by cable operators.

Hawaii from 119° W.L. Hawaii states that ESC's application provides little technical information and indicates that the power levels over Hawaii may be inadequate for consumers using small DBS receive dishes.¹¹ Second, Hawaii wants ESC to provide a programming package that is comparable in content and price to the packages ESC presently offers on the mainland.¹² Third, Hawaii requests that ESC be required to make available a programming package for its resident consumers that uses a dual feed antenna to receive programming from EchoStar 5 at 110° W.L. and ESC's satellites at 119° W.L., and that this package be available within six-months of the release of this order.¹³ Fourth, Hawaii takes issue with ESC's statement that it is not obligated to serve Hawaii and Alaska from 119° W.L. because the Commission previously authorized ESC to fulfill its geographic service requirements for 148° W.L. from the 119° W.L. location and asks that ESC acknowledge this obligation.¹⁴

5. Similarly, the State of Alaska filed comments asserting that ESC's application notes that it "expects" to provide additional service to Alaska and Hawaii but does not commit to doing so.¹⁵ Alaska also comments that ESC's application fails to indicate what size earth station antennas will be necessary to receive signals at an acceptable quality of service.¹⁶ In sum, Alaska asks the Commission to require ESC to submit additional information in support of ESC's claim that it will lead to "expanded and improved" DBS service in Alaska and Hawaii.

6. In replying to these comments, ESC states that its proposals benefit both states because they allow ESC to shift more of its basic programming from EchoStar 2, which cannot serve Alaska and Hawaii, to EchoStar 6, which can serve these states.¹⁷ It also notes that the Commission found that EchoStar 6 was technically capable of serving Alaska and Hawaii when ESC's predecessor in interest to EchoStar 6, MCI, sought authority to construct and launch two satellites, and again when ESC acquired the satellites from MCI.¹⁸ Nonetheless, ESC filed additional technical information with the Commission in support of its statement that EchoStar 6 is capable of serving Alaska and Hawaii.¹⁹ ESC also notes that the size of the earth station receive antennas for service to Alaska will vary depending on the elevation angles and power levels received from the satellite.²⁰ As to Hawaii's proposed conditions, ESC states that

¹¹ Comments and Petition for Conditions of the State of Hawaii ("*Hawaii Comments*"), filed June 29, 2000, at 4.

¹² *Hawaii Comments*, at 4.

¹³ *Id.* at 5.

¹⁴ *Id.* at 6.

¹⁵ Comments of the State of Alaska ("*Alaska Comments*"), filed June 27, 2000, at 2.

¹⁶ *Alaska Comments*, at 2.

¹⁷ EchoStar Satellite Corporation, Reply to Comments and Petition filed by Hawaii ("*ESC Reply to Hawaii*"), filed July 2, 2000, at 2; and EchoStar Satellite Corporation, Reply to Comments of the State of Alaska ("*ESC Reply to Alaska*") filed July 5, 2000, at 2.

¹⁸ *ESC Reply to Hawaii*, at 3.

¹⁹ *ESC Reply to Hawaii*, Attachment A, and *ESC Reply to Alaska*, Attachment A.

²⁰ *ESC Reply to Alaska*, at 4-5. Technical information provided by EchoStar indicates that receive antennas of 1 meter will provide adequate service to Juneau, Alaska. *EchoStar Reply to Alaska*, Attachment A. EchoStar states that service to other areas of Alaska will require larger receive antennas. *EchoStar Reply to Alaska*, at 5.

Hawaii's request for programming and prices comparable to the mainland is an attempt to relitigate an issue already decided by the Commission.²¹ In any event, ESC states that it is not obligated to justify its rates. Further, ESC notes that although it is working with a manufacturer to develop a dual feed earth station antenna to receive signals from 110° and 119° W.L., the Commission's geographic service rules do not require dual-feed earth station antennas.²² Finally, in regard to Hawaii's request that ESC acknowledge its obligation to provide service, ESC responds that the Commission's rules only require new licensees to serve Alaska and Hawaii from any location where technically feasible. Previously, ESC received a waiver of its geographic service requirements for EchoStar 1 at 148° W.L.. ESC states that the waiver was conditioned on EchoStar 4 providing service from 119° W.L., and did not require all satellites at 119° W.L. to provide service to Alaska and Hawaii.²³ Thus, the conditional waiver granted in a prior order is satisfied with the provision of service to Alaska and Hawaii from EchoStar 4 at 119° W.L. In any event, ESC claims the issue is moot since EchoStar 6 is in fact capable of serving Alaska and Hawaii and will therefore complement programming available to Hawaii from other ESC satellites at 119° W.L. and 110° W.L.²⁴

7. Senators Inouye and Stevens also filed a joint ex parte letter expressing their concerns about DBS service to Hawaii and Alaska.²⁵ The letter has been included in the Part 100 Rulemaking record and will be considered by the Commission at the Report and Order phase of that proceeding.

II. DISCUSSION

8. *EchoStar's Modification Application.* We find that granting ESC's proposed modifications will allow ESC to increase and improve its DBS offerings to consumers throughout the continental United States, Alaska and Hawaii. As noted in the STA granted last August, the application raises two issues of concern. First, ESC's request to relocate EchoStar 2 at 119.35° W.L. will result in EchoStar 2 operating outside of the 119° W.L. "cluster" in which U.S. Broadcasting Satellite Services ("BSS") may operate under the International Telecommunication Union ("ITU") Region 2 BSS plan.²⁶ Under this plan, an administration has the right to locate a satellite at any orbital position within the cluster

²¹ *ESC Reply to Hawaii*, at 4. Citing EchoStar Satellite Corporation, Directsat Corporation, EchoStar DBS Corporation, Application for Authority to Make Minor Modifications to Direct Broadcast Satellite Authorizations, Launch and Operational Authority, *Memorandum Opinion and Order*, 13 FCC Rcd 8595 (1998). In this order, the Bureau granted a waiver, with conditions, of EchoStar's obligation to provide service to Alaska and Hawaii from 148 W.L. The Bureau also stated it would not impose pricing conditions on EchoStar's service to Hawaii.

²² *Id.* at 6.

²³ See EchoStar Satellite Corp., Directsat Corp., EchoStar DBS Corp., Application for Authority to make minor modifications to Direct Broadcast Satellite Authorizations, Launch and Operational Authority, *Memorandum Opinion and Order*, 13 FCC Rcd 8595 (1998).

²⁴ *ESC Reply to Hawaii* at 8.

²⁵ Letter from the Honorable Daniel K. Inouye and Honorable Ted Stevens to Honorable William E. Kennard, Chairman, Federal Communications Commission, dated September 21, 2000.

²⁶ ITU Radio Regulation Appendix S30.

to which it is assigned.²⁷ ESC subsequently advised that it will not operate EchoStar 2 at 119° W.L. but will use it only as an in-orbit spare using the 119.35° W.L. as a storage orbit location. Should ESC need to operate EchoStar 2, it will move the satellite to a location within the cluster where either EchoStar 4 or EchoStar 6 will be located, and it will move the replaced satellite to 119.35° W.L.²⁸ We condition our grant on this plan, further noting that ESC's in-orbit spare may only use telemetry tracking & control functions while located outside of the 119° cluster.²⁹ In addition, ESC shall notify the Commission in writing prior to moving any of its satellites to or from 119.35° W.L.

9. Second, the operations of EchoStar 6 exceed the power levels allowed in Section 100.21 of our rules.³⁰ Section 100.21 requires that DBS satellites be operated in accordance with Appendices S30 and S30A of the ITU Radio Regulations. Appendices S30 and S30A provide the methodology and criteria for determining whether a specific satellite system might interfere with frequency assignments operated in accordance with the Region 2 BSS Plan and its associated Feeder Link Plan, other satellite systems or terrestrial services.³¹ ESC acknowledges that its operational parameters are outside of the limits contained in Annex 1 to Appendices S30 and S30A and asks for a waiver of Section 100.21.

10. The Commission may waive a rule for good cause shown.³² The Commission may exercise its discretion to waive a rule where the particular facts make strict compliance inconsistent with the public interest.³³ In addition, the Commission may take into account considerations of hardship, equity or more effective implementation of overall policy on an individual basis.³⁴ In its waiver request, ESC states that the EchoStar 6 power levels would be exceeded for only a small number of BSS channel assignments in the plan and may occur in limited geographic areas. ESC also states that while the overall protection margin in the BSS Plan may not fall more than 0.25 dB below 0 dB, its proposed operation of EchoStar 6 at 119.05° W.L. may exceed this protection margin limit by less than 0.50 dB.³⁵ This level,

²⁷ A cluster is defined as +/- 0.2° of the nominal orbit location, e.g., the cluster at 119° W.L. ranges from 118.8° to 119.2° W.L.

²⁸ Letter to Deputy Chief, Satellite Policy Branch, from James Talens, Counsel for EchoStar Satellite Corporation, dated August 7, 2000.

²⁹ In January 2000, ESC was granted an STA to operate EchoStar 4 at 119.35° W.L. In this authorization, the Bureau emphasized that the 119.35° W.L. orbital position was outside of the 119° orbital cluster and that any permanent occupation at this location required ITU coordination and a Region 2 modification and update. See Letter from Chief, Satellite and Radiocommunication Division to David Moskowitz, Senior Vice President and General Counsel, EchoStar Satellite Corp., dated January 14, 2000.

³⁰ 47 C.F.R. § 100.21

³¹ Region 2 includes North and South America.

³² 47 C.F.R. § 1.3.

³³ *Wait Radio v. FCC*, 418 F.2d 1153, 1159 (D.C. Cir. 1969).

³⁴ *Id.*

³⁵ ITU Radio Regulations provide the following: With respect to § 4.3.3.1 of Article 4, an administration in Region 2 shall be considered as being affected if the overall equivalent protection margin (footnote omitted) corresponding to a test point of its entry in the Region 2 Plan, including the cumulative effect of any previous modification to that Plan or any previous agreement, falls more than 0.25 dB below 0 dB, or, if already negative, (continued....)

according to ESC, would have a *de minimis* impact on any other assignments if they are brought into use. In addition, ESC states that it will coordinate with any affected Administration to resolve any interference issues.

11. We find good cause to grant ESC's request to waive Section 100.21. The proposed operation will exceed the power limitation by less than 0.50 dB, a minimal amount. Further ESC acknowledges that it must coordinate with any affected Administration. Because the technical parameters of EchoStar 6 will vary from those set forth in U.S. channel assignments in the Region 2 BSS plan, the Commission must request modification of the Region 2 BSS Plan and its associated Feeder Link Plan. Until these plans are modified to include the technical parameters of EchoStar 6 and its associated feeder links at 119° W.L., EchoStar 6 may not cause greater interference to other BSS or feeder link assignments, or other services or satellite systems operating in accordance with ITU Radio Regulations than that which would occur from the current USA plan assignments at 119° W.L. Furthermore, we remind ESC that no protection from interference caused by radio stations authorized by other administrations is guaranteed unless and until Appendices S30 and S30A plan procedures are successfully and timely completed. ESC must provide continuing documentation as necessary for the international coordination of EchoStar 6.

12. *Geographic Service Rules.* In the *DBS Service Rules Report and Order*, the Commission imposed geographic service obligations which require DBS licensees authorized after January 19, 1996 to provide service to Alaska and Hawaii upon commencement of operations, where technically feasible.³⁶ The issues raised here, however, regarding whether DBS providers' obligations to provide the same or comparable programming, at comparable prices and equipment as offered in the continental U.S., are the subject of a pending rulemaking to revise and clarify rules and policies for the entire DBS service.³⁷ Because the Commission sought comment on these and other issues in the context of revising its DBS service rules, and because these rules will be applicable to all DBS providers, we find that this rulemaking is a more appropriate vehicle to resolve these matters than this application proceeding. Therefore, we decline to condition the authorization as requested by Hawaii, but will carefully consider all geographic service rules in the Part 100 Rulemaking and will continue to monitor compliance with our rules. We remain committed to ensuring that residents of Alaska and Hawaii have access to DBS service. If the outcome of the rulemaking is favorable to the arguments raised by Alaska and Hawaii, EchoStar will be required to revise its offerings in accordance with the outcome of the pending rulemaking.

III. CONCLUSION

13. Based on the foregoing, we conclude that locating EchoStar 6 at 119.05° W.L., and relocating EchoStar 4 to 118.9° W.L. and EchoStar 2 at 119.35° W.L. will serve the public interest. ESC's operations at 119° W.L. will enhance competition by helping ESC to overcome technical difficulties and improve its service. The operation of EchoStar 6 will also allow ESC to relocate EchoStar 1 to 148°

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more than 0.25dB below the value resulting from: the Region 2 Plan as established by the 1983 Conference; or a modification of the assignment in accordance with this Appendix; or a new entry in the Region 2 Plan under Article 4; or any agreement reached in accordance with this Appendix. *See ITU Radio Regulations*, Appendix 30, Annex 1, 488, Volume 2.

³⁶ Revision of Rules and Policies for the Direct Broadcast Satellite Service, *Report and Order*, 11 FCC Rcd 9712, 9762 (1995); 47 C.F.R. § 100.53.

³⁷ Policies and Rules for the Direct Broadcast Satellite Service, *Notice of Proposed Rulemaking*, 13 FCC Rcd 6907 (1998) ("Part 100 Rulemaking").

W.L., as previously authorized, permitting EchoStar to commence service well before its required start date at that location.

IV. ORDERING CLAUSES

14. Accordingly, pursuant to 47 C.F.R. § 0.261, IT IS ORDERED, that the Applications of EchoStar Satellite Corporation, File No. SAT-MOD-199971230-00231 and SAT-MOD-19971230-00235, DBS 88-01 are GRANTED, and EchoStar is authorized to operate its satellites, EchoStar 6 at 119.05° W.L., EchoStar 2 at 118.9° W.L. and EchoStar 2 at 119.35° W.L, in accordance with the terms, representations and technical specifications set forth in its applications. In addition, we note that ESC will relocate EchoStar 1 from 119° W.L. to 148° W.L. as previously authorized.³⁸

15. IT IS FURTHER ORDERED, that the above referenced applications are granted subject to the following conditions: (1) until the ITU Region 2 BSS Plan and its associated Feeder Link Plan are modified to include the technical parameters of EchoStar 6 and its associated feeder links at 119° W.L., these satellite systems shall not cause greater interference than that which would occur from the current USA plan assignments at 119° W.L. to other BSS or feeder link assignments, or other services or satellite systems, operating in accordance with the ITU Radio Regulations; and (2) no protection from interference caused by radio stations authorized by other administrations is guaranteed to EchoStar 6 unless and until Appendices S30 and S30A Plan modification procedures are successfully and timely completed.

16. IT IS FURTHER ORDERED, that EchoStar Satellite Corporation will operate EchoStar 2 as an in-orbit spare at 119.35° W.L. and may utilize only telemetry tracking & control functions while located at the 119.35° W.L. orbit location.

17. IT IS FURTHER ORDERED, that EchoStar Satellite Corporation shall notify the Commission in writing prior to moving any satellite to or from the 119.35° W.L. orbital location.

18. IT IS FURTHER ORDERED, that EchoStar Satellite Corporation will coordinate the telemetry, tracking & control functions of EchoStar 6, Echostar 4 and EchoStar 2 with potentially affected networks operating on the same frequencies prior to redeployment and operation of any of these satellites.

19. IT IS FURTHER ORDERED, that during the relocation of EchoStar 1 from 119° W.L. to 148° W.L., EchoStar Satellite Corporation shall coordinate C-band telemetry, tracking & control operations will all potentially affected satellites.

³⁸ See note 3, *supra*.

20. IT IS FURTHER ORDERED, that the Request of EchoStar Satellite Corporation for a Waiver of Section 100.21 of the Commission's rules is GRANTED.

21. IT IS FURTHER ORDERED, that the request by the State of Hawaii that we condition this authorization on various requirements regarding service to Hawaii is DENIED.

FEDERAL COMMUNICATIONS COMMISSION

Thomas S. Tycz
Chief
Satellite and Radiocommunication Division